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Remarks:

Regarding the rejection of claims 4, 11 under 35 USC 112:

The applicant has canceled both claims 4 and 11 which is believed to render the rejection moot.

Regarding the rejection of claims 1-4, 7-17 under 35 USC 103(a) in view of US 6258771 to Hsu:

The applicant traverses the rejection of the claims in light of the Hsu reference.

Whereas the Examiner has properly noted that Hsu suggests thickened compositions which include gellan gum as a thickener, and that Hsu fails to specifically teach a combination of gellan gum and xanthan gum, the applicant disagrees with the Examiner's assertion that as both of these gums are known in the art it would have been obvious to utilize both gellan and xanthan gum in combination. It is the applicants' view that this is incorrect, and that the opposite is true. Namely Hsu actually "teaches away" from the utilization of xanthan gum in his compositions, even though they are mentioned by Hsu at col. 5, lines 23 – 33.

With respect to the scope of his invention, Hsu recites that:

"Compositions made by the process of this invention contain a polymer or polymer mixture which are capable of suspending relative large size particles while remaining readily pourable.

Specifically the polymer or mixture are selected to form a non-continuous suspending system. It is well known that polymers which require at least some ionic and/or surfactant species to be present as a prerequisite for network formation are susceptible to destabilization by surfactant, whether formed as a continuous network or as a non-continuous network of gum "bits". This invention surprisingly found that a polymer or polymer mix capable of forming a network (e.g., by the presence of electrolytes) can be stable in heavy duty liquid detergent compositions with high surfactant concentration (i.e., 15% to 85%, by wt., preferably 20% to 80%, more preferably 21% to 75% by wt. of the composition) if prepared in the proper way. This is the case even with ionic surfactants.

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The polymer or polymer mixture which is capable of forming a non-continuous network of the subject invention will usually be of natural origin, specifically one or more polysaccharides will preferably be used. Generally, they will have MW of greater than half a million dalton. However, it is possible that the polymer, or one or more polymers in a mixture of polymers, might be a chemically modified natural polymer such as a polysaccharide which has been chemically treated to provide or alter substituent groups thereon. It is also conceivable that a polymer mixture might contain a synthetic polymer together with a natural polymer. Usually however, the polymer which is used will include a polysaccharide chain of natural origin.”

(Hsu, col. 4, line 57 – col. 5, line 16)

However, while Hsu describes and exemplifies certain compositions which include gellan gum, Hsu expressly fails to teach or demonstrate compositions which include both xanthan and gellan gum in combination. On this point, it is clearly that Hsu expressly teaches that such should be excluded in his compositions as they fail to form the characteristic non-continuous network which characterizes the compositions of US 6258771. Hsu clearly recites in his specification:

“In particular, the invention is directed to specific gums (e.g., carrageenan, gellan, agar, gelatin) and combinations of these gums with other materials which will form a so-called “non-continuous” suspending network wherein the non-continuous gum bits aggregate to form a suspending system capable of suspending particles of 300 to 5000 microns in size.” (Hsu, col. 4, lines 29 – 35)

Thus, it is plainly clear that the inclusion of xanthan gum is inappropriate to the compositions which he indicates:

“The present invention is particularly directed to use of specific gums which will form non-continuous network suspending gums in contrast to other gums (e.g., xanthan gum), described in applicants copending application, which generally are used to form a “continuous” network.” (Hsu, col. 4, lines 9 – 14)

Thus, in view of the foregoing it is the applicant’s position that the Examiner’s reliance upon the Hsu reference against the presently amended claims is misplaced, and that further consideration of US 6258771 to Hsu against the claims is properly withdrawn.

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Regarding the rejection of claims 1-9, 13-25 under 35 USC 103(a) in view of the combined references of WO 01/77278 to Blandiaux in further view of US 6689223 to Meine:

The applicant traverses the rejection of the claims in light of the combined Blandiaux and Meine references.

The applicant traverses the Examiner's reliance on the Blandiaux reference particularly in further view of the Meine reference.

Reviewing the Blandiaux disclosure, the compositions described therein essentially require at least the following constituents which are necessarily present in order to provide the liquid crystal compositions of that reference:

"1% to 30% of a magnesium salt of a C₈ -C₁₆ linear alkyl benzene sulfonate surfactant;
1% to 20% of a water-mixable cosurfactant having either limited ability or substantially no ability to dissolve oily or greasy soil;
0.1% to 5% of a magnesium salt such as magnesium oxide, magnesium sulfate heptahydrate or magnesium chloride;
0.1% to 10% of a perfume, essential oil, or water insoluble hydrocarbon having 6 to 18 carbon atoms and mixtures thereof;
1% to 20% of at least one ethoxylated nonionic surfactant;
0.1% to 3% of an unsaturated fatty acid having 12 to 20 carbon atoms;
0.01% to 0.5% of an alkali metal hydroxide such as sodium hydroxide or potassium hydroxide;
0.1% to 2% of a hydroxy containing organic acid selecting from the group consisting of lactic acid, citric acid or the hydroxy benzoic acid and mixtures thereof;
0.01% to 1% of a polymeric thickener such as methacrylate, xanthan gums and hydroxy alkyl cellulosics such as hydroxy ethyl cellulose;
0.1% to 10% of an abrasive; and
the balance being water, wherein the liquid crystal detergent composition does not contain any grease release agents such as choline chloride or buffering system which is a nitrogenous buffer which is ammonium or alkaline earth carbonate, guanidine derivates, alkoxyalkyl amines and alkyleneamines C₃ -C₇ alkyl and alkenyl monobasic and dibasic acids such as C₄ -C₇ aliphatic carboxylic diacids which do not contain a hydroxy group,

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boric acid, phosphoric acid, amino alkylene phosphonic acid and the composition is pourable and has a storage modulus equal to or higher than one Pascal (1 Newton/sq. m.), more preferably higher than 10 Pascal at a temperature of 20.degree. C. to 40.degree. C. at a strain of 0.1% to 5% and a frequency of 10 radians per second as measured on a Carri-Med CS Rheometer and is thermally stable and exist as a clear liquid crystal in the temperature range from 8C. to 43°C, more preferably 4°C to 43°C. "

As is readily understood from the above, the liquid crystal compositions of Blandiaux would necessarily require that *each* and *every one* of the above recited constituents be necessarily present in order to provide the "liquid crystal" compositions which exhibit the types of properties recited by Blandiaux at pages 17 – 18. Therein Blandiaux discusses at length the structure of his compositions, as an essential characteristic of his compositions.

It is the present applicant's view that their present compositions are not properly considered to be obvious from the Blandiaux liquid crystal compositions for several reasons.

First, a skilled artisan would be dissuaded from making any changes to the Blandiaux compositions, either by omission of any constituent(s), or by addition or substitution of any constituent(s) as such would be expected to disrupt the particular rheological structure and properties of the Blandiaux compositions which clearly require a delicate balance of not less than 10 distinct essential constituents. It would similarly be abundantly clear to such a skilled artisan that modification of the Blandiaux formula, either by the addition of further constituents not specified by Blandiaux, or any reduction in the specific constituent recited by Blandiaux beyond those specifically elucidated would fall outside of the scope of his teaching, and also would likely be expected to disrupt the particular rheology and other technical characteristics which are provided by those prior art compositions.

In contrast, it is clear by inspection and comparison that the present applicant's compositions do not require the same family of 10 essential constituents in order to

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provide their compositions. It is contended that Blandiaux is properly limited to what it teaches and suggests, which is that require a delicate balance of not less than 10 distinct essential constituents is required in order to produce a successful liquid crystalline composition according to Blandiaux. The applicant's much simpler compositions are not anticipated by Blandiaux, as well as being unobvious over Blandiaux's composition. Thus it is the applicant's view that Blandiaux's specific compositions would clearly dissuade one of skill in the art to either omit any of the ten necessary constituents which are used by Blandiaux to form his liquid-crystal compositions, and/or to consider the use of any thickener other than what is specifically exemplified by Blandiaux as being successfully used in his compositions. As the Examiner has pointed out, Blandiaux does not teach gellan gum or the specific pair of gellan gum with xanthan gum.

Second, while Blandiaux recites that in his liquid crystal compositions 0.1 – 10% of a selected abrasive can be present, he also immediately thereafter the actual useful range of his abrasive is circumscribed when he states that "preferably 0.25 to 2%wt. of an abrasive selected from the group consisting of amorphous hydrated silica and polyethylene powder particles and mixtures thereof." may be used. A review of the few, working examples of the Blandiaux compositions at page 18 indeed reveals that only 1.1%wt. of "Tixosil 103" an amorphous silicon is present. It is quite clear that Blandiaux recites only a very circumscribed group of abrasives which might find use, and that in only very small amounts. However, quite pertinently Blandiaux fails to teach or even remotely suggest the utility of visibly discrete particles based on alginate materials such as are provided in the instant invention and claimed in dependent claim 4.

In view of the foregoing it is believed that the Examiner's further reliance on Blandiaux against the presently presented claims is inappropriate. Reconsideration of the grounds of rejection and withdrawal of the Blandiaux reference from further consideration is solicited.

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The Examiner's reliance upon the Meine reference is believed to be misplaced as well, as Meine does not overcome the fatal flaws of the Blandiaux reference. Although the Examiner has indicated that it would be "obvious" to utilize a combination of both a xanthan gum and a gellan gum in a thickened composition as these two materials are recited in the long and rather generic list of thickener constituents which are listed by Meine at col. 13, line 50 – col. 14, line 59, the applicant disagrees. First, as discussed above Blandiaux provides a 10-component composition which is apparently critical to the success of his liquid-crystal compositions. As also discussed, Blandiaux fails to disclose or demonstrate any thickener other than the hydroxyl ethyl cellulose thickener in his compositions, which is neither xanthan gum or gellan gum. Second, it is pointed out that Meine actually recites a rather large number of possible thickener constituents but fails to teach or suggest that a specific combination of xantham gum and gellan gum should be selected out from the large number possible thickener constituents. Meine fails to provide any guidance whereby these two thickeners should be selected over the large number of other possible thickeners, or why these particular thickeners should be paired. Indeed, the Blandiaux reference fails to demonstrate any thickener but hydroxymethyl cellulose, and Blandiaux's 10-component system would dissuade a skilled artisan from any modifications or substitutions. Meine is further defective in that it is clear that in his examples, only non-thickener containing compositions are exemplified so these too provide the requisite teaching or suggestion to "select out" this specific combination of thickeners amongst a myriad of other possibilities. At best Meine's generic recitation of known-art thickener provides no further guidance to a skilled artisan than would a chemical supply catalog which similarly lists an array of similar constituents but provides little further useful guidance. It is the applicant's view that the Examiner's proposed combination is based on a "hindsight reconstruction" of the applicant's invention which is based on a retrospective assemblage of the applicant's claimed invention wherein there lacks an appropriate teaching or suggestion. Such is impermissible. "Obviousness cannot be established by combining the teachings of prior art to produce the claimed invention, absent some teaching suggestion or incentive supporting the combination [...]" At best, in view of these disclosures, one skilled in the art might find it obvious to try various

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combinations of these known (scale and corrosion prevention) agents. However, that is not the standard of 35 USC Sec. 103" In re Geiger 2 USPQ2d 1276, 1278 (CAFC, 1987)
See also W.L. Gore & Associates, Inc. v. Garlock, Inc. 220 USPQ 303 (CAFC, 1983);

Accordingly, reconsideration of propriety of the rejection under 35 USC 103, and its withdrawal is solicited.

Should the Examiner believe that telephonic communication will advance the prosecution of the present application, they are invited to telephone the undersigned at their convenience.

Petition for a One-Month Extension of Time

The applicant respectfully petitions for a one-month extension of time in order to permit for the timely entry of this response. The Commissioner is hereby authorized to charge the fee to Deposit Account No. 14-1263 with respect to this Petition.

Conditional Authorization for Fees

Should any further fee be required by the Commissioner in order to permit the timely entry of this paper, the Commissioner is authorized to charge any such fee to Deposit Account No. 14-1263.

Respectfully Submitted;

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